IN THE CLAIMS

Please enter the below claim amendments.

1-16 (cancelled)

17. (currently amended) A **method to obtain an ultrasonic measurement signal having an improved signal to noise ratio to determine characteristics of a fluid flow** ~~signal processing method for improving the signal to noise ratio in ultrasonic measurements~~, the method comprising

transmission of a predefined timed sequence of a number of ultrasonic burst signals at a first transducer**, the burst signals being transmitted within a fluid flow**, wherein the time periods between subsequently transmitted burst signals of said sequence are set according to a non-uniform pattern, wherein at least one time period differs from an other time period, and

reception of a signal representing said transmitted sequence of ultrasonic burst signals at a second transducer,

addition of multiple time-shifted copies of the received signal to said original received signal to obtain a sum of the original received signal and its time-shifted copies, wherein the time shift of a copy is related to said predefined pattern, and

providing a reconstruction of an original burst signal having an improved signal to noise ratio from said sum **to determine characteristics of the fluid flow**.

18. (previously presented) A signal processing method according to claim 17, wherein all time periods between subsequently transmitted signals of said sequence are different.

19. (previously presented) A signal processing method according to claim 17, wherein the number of copies is equal to the number of burst signals in said sequence minus one.

20. (previously presented) A signal processing method according to claim 17, wherein the time shifts are proportional to said time periods.

21. (previously presented) A signal processing method according to claim 17, wherein a single burst signal is reconstructed.

22. (previously presented) A signal processing method according to claim 17, wherein the shape of an original burst signal is reconstructed.

23. (previously presented) A signal processing method according to claim 17, wherein the travel time of the reconstructed original burst signal is determined.

24. (currently amended) A method of determining a flow characteristic of a fluid in a conduit using an ultrasonic measurement device, comprising

transmitting a predefined timed sequence of a number of ultrasonic burst signals **within the fluid** at a first transducer, such that the time periods between subsequently transmitted burst signals of said sequence are set according to a non-uniform pattern, and

~~receiving~~ **storing** a signal representing said sequence of ultrasonic burst signals at a second transducer, adding multiple time-shifted copies of the received signal to obtain a sum of the original received signal and its time-shifted copies, wherein the time shifts are related to said predefined pattern,

providing a reconstruction of ~~reconstructing~~ an original burst signal, determining the travel time of said reconstructed original burst signal, and calculating the flow characteristic **of the fluid** using said travel time.

25. (previously presented) A method according to claim 24, wherein all time periods between the subsequently transmitted signals of said sequence are different.

26. (previously presented) A method according to claim 24, wherein the number of copies is equal to the number of burst signals in said sequence minus one.

27. (previously presented) A method according to claim 24, wherein the time shifts are proportional to said time periods.

28. (previously presented) A method according to claim 24, wherein a single burst signal is reconstructed.

29. (previously presented) A method according to claim 24, wherein the shape of an original burst signal is reconstructed.

30. (previously presented) A method according to claim 24, wherein a zero crossing from said reconstructed burst signal is defined as a reference for determining the travel time of said reconstructed burst signal.

31. (previously presented) A method according to claim 24, wherein the flow velocity of the fluid is determined.

32. (previously presented) Device for determining a flow characteristic of a fluid in a conduit, comprising ultrasonic transmission means for providing a predefined timed sequence of a number of ultrasonic burst signals for injection into the fluid, timing means for setting the transmission time of each burst signal of said sequence according to a predefined non-uniform pattern, ultrasonic reception means for receiving a signal, representing said sequence of ultrasonic burst signals, and signal processing means for processing said signal in order to determine the flow characteristic from said signal, wherein the signal processing means comprise means for providing multiple time-shifted copies of the received signal which copies are time shifted according to a predefined relationship with said non-uniform pattern, and for adding the multiple time-shifted copies of the received signal to the received signal, and for reconstructing an original burst signal, and for calculating the flow characteristic using said reconstructed original burst signal.